

## CLAIMS

What is claimed is:

1. A system for object management, the system comprising:

an object monitoring system comprising a computer operable to:

5 determine whether a signal representing a presence of at least one object to be monitored has been received;

if a signal representing a presence of at least one object to be monitored has been received, determine whether a predetermined quantity of objects is present;

10 determine whether a signal representing a state of at least one object to be monitored has been received; and

if a signal representing a state of at least one object to be monitored has been received, determine whether at least one object has a predetermined state.

15 2. The system of claim 1, wherein the object monitoring system further comprises an object coupling device.

3. The system of claim 1, wherein the object monitoring system further comprises:

20 a first sensor system, the first sensor system operable to sense the presence of at least one object to be monitored and to generate a signal representative thereof; and

a second sensor system, the second sensor system operable to sense the state of at least one object to be monitored and to generate a signal representative thereof.

25 4. The system of claim 3, wherein the first sensor system comprises a plurality of radio frequency identification transponders and a radio frequency identification reader.

5. The system of claim 3, wherein the first sensor system comprises an imaging device.

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6. The system of claim 3, wherein the second sensor system comprises a sensor operable to detect an environmental condition in a vicinity of at least one object.

5 7. The system of claim 6, wherein the environmental condition comprises temperature.

8. The system of claim 3, wherein the second sensor system comprises a location sensor.

10 9. The system of claim 3, wherein the computer is further operable to determine the predetermined quantity of objects and the predetermined object state based on signals from the first and second sensor systems.

15 10. The system of claim 1, wherein the computer is further operable to:  
determine whether a signal indicating the predetermined object state has been received; and  
if the signal has been received, determine the predetermined object state based on the signal.

20 11. The system of claim 1, wherein the computer is further operable to determine the relative positions of objects.

25 12. The system of claim 1, wherein the computer is further operable to determine whether monitoring should continue.

13. The system of claim 12, wherein the computer stops monitoring if a predetermined period of time expires.

30 14. The system of claim 1, wherein the predetermined quantity of objects and the predetermined object state are expressed as rules.

15. The system of claim 1, further comprising a wireless communication device coupled to the computer, the wireless communication device operable to send data from and receive data for the computer.

5 16. The system of claim 15, wherein the computer authenticates a destination before sending data thereto.

17. The system of claim 15, wherein sent data comprises the quantity of objects present and the at least object state.

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18. The system of claim 15, wherein received data comprises an allowable object state.

19. The system of claim 15, wherein sent data comprises an alert indicating that at  
15 least one monitored object does not have a predetermined status.

20. The system of claim 15, further comprising a second object monitoring system, the second object monitoring system comprising:

20 a sensor system operable to sense a presence of at least one object to be monitored and to generate a signal representative thereof;

a second computer coupled to the sensor system, the second computer operable to determine whether a predetermined quantity of objects is present; and

25 a second wireless communication device coupled to the second computer, the second wireless communication device operable to send data from and receive data for the second computer.

21. The system of claim 20, wherein:  
the received data comprises an object status request; and  
the sent data comprises object status.

- 5 22. The system of claim 1, wherein the object monitoring system is adapted to be  
located in the vicinity of an object to be monitored.

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23. A method for object management at an object monitoring system, the method comprising:

determining whether a signal representing a presence of at least one object to be monitored has been received;

5 determining whether a signal representing a state of at least one object to be monitored has been received;

if a signal representing a presence of at least one object to be monitored has been received, determining whether a predetermined quantity of objects is present; and

10 if a signal representing a state of at least one object to be monitored has been received, determining whether at least one object has a predetermined state.

24. The method of claim 23, further comprising:

sensing a presence of at least one object to be monitored; and

sensing a state of at least one object to be monitored.

15 25. The method of claim 24, wherein sensing a presence of at least one object to be monitored comprises receiving a response from at least one radio frequency identification transponder.

20 26. The method of claim 23, wherein determining whether at least one object has a predetermined state comprises determining relative positions of objects.

25 27. The method of claim 23, wherein determining whether at least one object has a predetermined state comprises determining an environmental condition in a vicinity of at least one object.

28. The method of claim 23, further comprising determining whether monitoring should continue.

29. The method of claim 23, further comprising determining the predetermined quantity of objects and the predetermined object state by sensing a presence of at least one object to be monitored and sensing a state of at least one object to be monitored.

5 30. The method of claim 23, further comprising wirelessly communicating data.

31. The method of claim 30, further comprising authenticating a destination before sending data thereto.

10 32. The method of claim 30, wherein sent data comprises the quantity of objects present and the state of at least one object.

33. The method of claim 30, wherein sent data comprises an alert indicating that at least one monitored object does not have a predetermined status.

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34. The method of claim 30, wherein received data comprises an allowable object status.

35. The method of claim 30, wherein received data comprises an indication of a  
20 quantity of objects sensed by a second object monitoring system.

36. The method of claim 35, wherein sent data comprises an object status request.

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37. A system for object management, the system comprising:  
an object monitoring system comprising:

a first sensor system, the first sensor system operable to sense a  
presence of at least one object to be monitored and to generate a signal representative thereof,

5 a second sensor system, the second sensor system operable to sense a  
state of at least one object to be monitored and to generate a signal representative thereof,

a computer coupled to the first sensor system and the second sensor  
system, the computer operable to:

determine whether a signal representing a presence of at least  
10 one object to be monitored has been received;

if a signal representing a presence of at least one object to be  
monitored has been received, determine whether a predetermined quantity of objects  
is present, wherein the predetermined quantity of objects is expressed a rule;

determine whether a signal representing a state of at least one  
15 object to be monitored has been received; and

if a signal representing a state of at least one object to be  
monitored has been received, determine whether at least one object has a  
predetermined state, wherein the predetermined object state is expressed as a rule, and

a wireless communication device coupled to the computer, the wireless  
20 communication device operable to send data from and receive data for the computer.

38. The system of claim 37, wherein the object monitoring system further  
comprises an object coupling device.

25 39. The system of claim 37, wherein the second sensor system comprises a sensor  
operable to detect an environmental condition in the vicinity of at least one object.

40. The system of claim 37, wherein the computer is further operable to determine  
the predetermined quantity of objects and the predetermined object state based on signals  
30 from the sensor systems.

41. The system of claim 37, wherein the computer authenticates a destination before sending data thereto.

5 42. The system of claim 37, wherein received data comprises the predetermined object state.

43. The system of claim 37, wherein sent data comprises an alert indicating that at least one monitored object does not have a predetermined status.

10 44. The system of claim 37, further comprising a second object monitoring system, the second object monitoring system comprising:

a third sensor system, the third sensor system operable to sense a presence of at least one object to be monitored and to generate a signal representative thereof;

15 a second computer, the second computer coupled to the third sensor system, the second computer operable to determine whether a predetermined quantity of objects is present; and

a second wireless communication, the second wireless communication device coupled to the second computer, the second wireless communication device operable to send data from and receive data for the second computer.

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45. The system of claim 44, wherein:  
the received data comprises an object status request; and  
the sent data comprises object status.

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